

## Microbial Metabolites with Ability of Anti-Free Radicals

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**Abstract :** Free radicals can accelerate aging on human skin by causing lipid oxidation, protein denaturation, and even DNA mutation. Substances with the ability of anti-free radicals can be used as functional components in cosmetic products. Research are attracted to develop new anti-free radical components for cosmetic application. This study was aimed to evaluate the microbial metabolites on free radical scavenging ability. Two microorganisms, PU-01 and PU-02, were isolated from soil of hot spring environment and grew in LB agar at 50°C for 24 h. The suspension was collected by centrifugation at 4800 g for 3 min, The anti-free radical activity was determined by DPPH (1,1-diphenyl-2-picrylhydrazyl) scavenging assay. The result showed that the growth medium of PU-01 presented a higher DPPH scavenging effect than that of PU-02. This study presented potential anti-free radical components from microbial metabolites that might be applied in anti-aging cosmetics.

**Keywords :** anti-ageing, anti-free radical, biotechnology, microorganism

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